

Patent claims

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- SUB A1
1. A device for placing flip chips (6) on a substrate (8) in the form of a leadframe, the device having a movable placement head (1), which picks up the flip chips (6) from a stock of components (for example 5) and places them on the substrate (8), characterized in that the placement head (1) is provided with a turning device (9) for the flip chips (6), in that the placement head (1) is provided with a multiplicity of grippers (4) circulating in a turret-like indexed manner, in that the turning device (9) is assigned to a stationary part (for example 2) of the placement head (1), in that the turning device (9) respectively takes over one of the flip chips (6) in a first holding station of the grippers (4) and returns it, after turning, to one of the grippers (4) in one of the downstream holding stations.
 2. The device as claimed in claim 1, characterized in that the turning device (9) has two pivotable holders (7), one of which can be aligned with the first of the holding stations, in that the second holder (7) can be aligned with a downstream one of the holding stations and in that the two holders (7) can be pivoted into a mutual transfer position, in which their ends, carrying the flip chip (6) and projecting toward each other, are aligned with each other.
 3. The device as claimed in claim 2, characterized in that the holders (7) are designed as pivotably mounted suction pipettes, in that the grippers (4) are designed as suction grippers protruding radially from the placement head (1),

AI 5 in that the pivoting axes (10), perpendicular to the turning plane of the grippers (4), of the holders (7) are arranged in axial extension of the grippers (4) and in that longitudinal axes of the holders and of the grippers are in line with one another during the transfer between them of the flip chips.

10 4. The device as claimed in one of the preceding claims, characterized in that between the holders (7) directed oppositely facing other and in line with each other in the transfer position there is a clearance, which is somewhat larger than the thickness of the flip chips (6).

15 5. The device as claimed in one of the preceding claims, characterized in that the first and second holding stations are arranged immediately following each other.

Add A2